IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

APPLE, INC.,)
Plaintiff,) C.A. No. 1:22-cv-01377-MN-JLH
V.)
MASIMO CORPORATION and SOUND UNITED, LLC,) JURY TRIAL DEMANDED)
Defendants.)))
SOUND UNITED, LLC,)
Counter-Claimant,))
V.)
APPLE INC.,)
Counter-Defendant.)) .)

DEFENDANT SOUND UNITED, LLC'S ANSWER TO COMPLAINT AND COUNTERCLAIMS

Defendant Sound United, LLC, ("Sound United") hereby submits its answer to the Complaint of Plaintiff Apple Inc. ("Plaintiff" or "Apple") and counterclaims as follows:¹

INTRODUCTION

- 1. Sound United lacks knowledge and information sufficient to form a belief as to the truth of the allegations in Paragraph 1 of the Complaint, and on that basis denies those allegations.
- 2. Sound United lacks knowledge and information sufficient to form a belief as to the truth of the allegations in Paragraph 2 of the Complaint, and on that basis denies those allegations.
 - 3. The allegations in Paragraph 3 of the Complaint are not directed against Sound

United and, therefore, no answer is made to these allegations.

4. The allegations in Paragraph 4 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.

THE PARTIES

- 5. Sound United admits the allegations in Paragraph 5 of the Complaint.
- 6. Sound United admits the allegations in Paragraph 6 of the Complaint.
- 7. Sound United admits that it is a Delaware limited liability company, is a wholly owned subsidiary of Masimo, and has appointed the Corporate Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808 as its registered agent for service of process. Sound United denies the remaining allegations in Paragraph 7 of the Complaint.
- 8. The allegations in Paragraph 8 of the Complaint are legal conclusions to which no response is required. To the extent the allegations are deemed factual, Sound United denies the allegations.

JURISDICTION AND VENUE

- 9. Sound United admits the allegations in Paragraph 9 of the Complaint.
- 10. Sound United admits that it is subject to personal jurisdiction in this Court. The remaining allegations in Paragraph 10 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.
- 11. Sound United admits that venue is proper in this Court with respect to Sound United. The remaining allegations in Paragraph 11 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.

BACKGROUND

12. Sound United lacks knowledge and information sufficient to form a belief as to the

truth of the allegations in Paragraph 12 of the Complaint, and on that basis denies those allegations.

- 13. Sound United admits that Apple has accused the W1 watch and charger of patent infringement. Sound United denies the remaining allegations in Paragraph 13 of the Complaint.
- 14. Sound United lacks knowledge and information sufficient to form a belief as to the truth of the allegations in Paragraph 14 of the Complaint, and on that basis denies those allegations.
- 15. Sound United lacks knowledge and information sufficient to form a belief as to the truth of the allegations in Paragraph 15 of the Complaint, and on that basis denies those allegations.
- 16. Sound United lacks knowledge and information sufficient to form a belief as to the truth of the allegations in Paragraph 16 of the Complaint, and on that basis denies those allegations.
- 17. Sound United lacks knowledge and information sufficient to form a belief as to the truth of the allegations in Paragraph 17 of the Complaint, and on that basis denies those allegations.
- 18. Sound United admits that U.S. Design Patent Nos. D735,131 and D883,279 name Apple, Inc. as the "Applicant" and "Assignee" on the face of each patent. Sound United denies the remaining allegations in Paragraph 18 of the Complaint.
- 19. Sound United lacks knowledge and information sufficient to form a belief as to the truth of the allegations in Paragraph 19 of the Complaint, and on that basis denies those allegations.
- 20. Sound United lacks knowledge and information sufficient to form a belief as to the truth of the allegations in Paragraph 20 of the Complaint, and on that basis denies those allegations.
- 21. The allegations in Paragraph 21 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.
- 22. Sound United admits that in April 2022 it was acquired by Masimo. The remaining allegations in Paragraph 22 are not directed against Sound United and, therefore, no answer is made to these allegations.

- 23. The allegations in Paragraph 23 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.
- 24. The allegations in Paragraph 24 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.
- 25. The allegations in Paragraph 25 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.
- 26. The allegations in Paragraph 26 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.
- 27. The allegations in Paragraph 27 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.
- 28. The allegations in Paragraph 28 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.
- 29. The allegations in Paragraph 29 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.
- 30. The allegations in Paragraph 30 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.
- 31. The allegations in Paragraph 31 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.
- 32. The allegations in Paragraph 32 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.
- 33. The allegations in Paragraph 33 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.
 - 34. The allegations in Paragraph 34 of the Complaint are not directed against Sound

United and, therefore, no answer is made to these allegations.

- 35. The allegations in Paragraph 35 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.
- 36. The allegations in Paragraph 36 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.
- 37. Sound United admits that in April 2022 it was acquired by Masimo. The remaining allegations in Paragraph 37 are not directed against Sound United and, therefore, no answer is made to these allegations.
- 38. Sound United admits that the referenced article states, "But, now Masimo has launched its own W1 watch to compete with Apple. This feels more personal than fiduciary." The remaining allegations in Paragraph 38 are not directed against Sound United and, therefore, no answer is made to these allegations.
- 39. The allegations in Paragraph 39 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.
- 40. The allegations in Paragraph 40 of the Complaint are not directed against Sound United and, therefore, no answer is made to these allegations.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. D883,279

- 41. Sound United repeats and incorporates here by reference its responses to the allegations in preceding Paragraphs 1–40.
- 42. Sound United admits that U.S. Design Patent No. D883,279 ("D279 Patent") lists on its face the title "Electronic Device," an issue date of May 5, 2020, "Jody Akana" as one of many named inventors, and "Apple Inc." as the assignee. The remaining allegations in Paragraph 42 of the Complaint are legal conclusions to which no response is required. To the extent the

allegations are deemed factual, Sound United denies that the D279 Patent was validly issued.

- 43. The allegations in Paragraph 43 of the Complaint are legal conclusions to which no response is required.
- 44. The allegations in Paragraph 44 of the Complaint are legal conclusions to which no response is required.
 - 45. Sound United denies the allegations in Paragraph 45 of the Complaint.
 - 46. Sound United denies the allegations in Paragraph 46 of the Complaint.
 - 47. Sound United denies the allegations in Paragraph 47 of the Complaint.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. D947,842

- 48. Sound United repeats and incorporates here by reference its responses to the allegations in preceding Paragraphs 1–47.
- 49. Sound United admits that U.S. Design Patent No. D947,842 ("D842 Patent") lists on its face the title "Electronic Device," an issue date of April 5, 2022, "Jody Akana" as one of many named inventors, and "Apple Inc." as the assignee. The remaining allegations in Paragraph 49 of the Complaint are legal conclusions to which no response is required. To the extent the allegations are deemed factual, Sound United denies that the D842 Patent was validly issued.
- 50. The allegations in Paragraph 50 of the Complaint are legal conclusions to which no response is required.
- 51. The allegations in Paragraph 51 of the Complaint are legal conclusions to which no response is required.
 - 52. Sound United denies the allegations in Paragraph 52 of the Complaint.
 - 53. Sound United denies the allegations in Paragraph 53 of the Complaint.
 - 54. Sound United denies the allegations in Paragraph 54 of the Complaint.

COUNT III: INFRINGEMENT OF U.S. PATENT NO. D962,936

- 55. Sound United repeats and incorporates here by reference its responses to the allegations in preceding Paragraphs 1–54.
- 56. Sound United admits that U.S. Design Patent No. D962,936 ("D936 Patent") lists on its face the title "Electronic Device," an issue date of Sep. 6, 2022, "Jody Akana" as one of many named inventors, and "Apple Inc." as the assignee. The remaining allegations in Paragraph 56 of the Complaint are legal conclusions to which no response is required. To the extent the allegations are deemed factual, Sound United denies that the D936 Patent was validly issued.
- 57. The allegations in Paragraph 57 of the Complaint are legal conclusions to which no response is required.
- 58. The allegations in Paragraph 58 of the Complaint are legal conclusions to which no response is required.
 - 59. Sound United denies the allegations in Paragraph 59 of the Complaint.
 - 60. Sound United denies the allegations in Paragraph 60 of the Complaint.
 - 61. Sound United denies the allegations in Paragraph 61 of the Complaint.

COUNT IV: INFRINGEMENT OF U.S. PATENT NO. D735,131

- 62. Sound United repeats and incorporates here by reference its responses to the allegations in preceding Paragraphs 1–61.
- 63. Sound United admits that U.S. Design Patent No. D735,131 ("D131 Patent") lists on its face the title "Charger," an issue date of July 28, 2015, "Jody Akana" as one of many named inventors, and "Apple Inc." as the assignee. The remaining allegations in Paragraph 63 of the Complaint are legal conclusions to which no response is required. To the extent the allegations are deemed factual, Sound United denies that the D131 Patent was validly issued.

- 64. The allegations in Paragraph 64 of the Complaint are legal conclusions to which no response is required.
- 65. The allegations in Paragraph 65 of the Complaint are legal conclusions to which no response is required.
 - 66. Sound United denies the allegations in Paragraph 66 of the Complaint.
 - 67. Sound United denies the allegations in Paragraph 67 of the Complaint.
 - 68. Sound United denies the allegations in Paragraph 68 of the Complaint.

PRAYER FOR RELIEF

Sound United denies that Plaintiff is entitled to any of the relief enumerated in the Complaint or to any relief whatsoever.

DEFENSES

First Defense

The claims of the D279, D842, D936, and D131 Patents ("Apple Design Patents") are invalid for failure to satisfy one or more of the requisite Conditions of Patentability set forth in Title 35 of the United States Code, including, without limitation, §§ 102, 103, 112, and 171 in view of the defenses recognized in 35 U.S.C. § 282(b), and/or for claiming functional or generic elements, as further set forth below in Sound United's counterclaim of invalidity.

Second Defense

Apple prosecuted, and now asserts against Sound United, the D279, D842, and D936 Patents ("the Sensor Design Patents") and the D131 Patent even though Apple knows they were fraudulently procured. The Apple Design Patents are unenforceable for inequitable conduct.

In prosecuting the Apple Design Patents, Apple concealed that the Apple Design Patents claimed designs that Apple knew were functional, non-ornamental, and not patentable subject

matter, including as documented in earlier-filed utility patents. Apple also concealed the true inventors who conceived of the claimed designs. Apple's concealment of the earlier-filed utility patents and the true inventors was done with intent to deceive the USPTO, and but for these material misrepresentations, the USPTO would not have issued the Apple Design Patents.

On September 5, 2017, Apple filed provisional application 62/554,196 (the "'196 Application"). On March 19, 2018, Apple filed provisional application 62/644,886 (the "'886 Application"). On August 30, 2018, Apple filed U.S. Patent Application 16/118,282, (the "'282 Application") which published on March 7, 2019, as US2019/0072912 (the "'912 Publication"). The '912 Publication eventually issued as U.S. Patent No. 11,432,766 (the "'766 Patent"). The '766 Patent claims priority to the '196 Application and the '886 Application.

On November 16, 2018, Apple filed U.S. Patent Application 16/193,836 (the "'836 Application"), which published on April 4, 2019, as US2019/0101870, and issued as U.S. Patent No. 10,610,157 (the "'157 Patent"). On April 6, 2020, Apple filed a continuation of the '836 Application as U.S. Patent Application 16/841,543, which published on July 23, 2020, as US2020/0229761, and issued as U.S. Patent No. 10,987,054 (the "'054 Patent"). Both the '054 Patent and the '157 Patent claim priority to the '196 Application. Apple asserts the '054 Patent against Sound United.

On June 20, 2014, Apple filed U.S. Patent Application 14/310,694 (the "'694 Application"), which published on December 24, 2015, as US2015/0371768 (the "'768 Publication), and issued as U.S. Patent No. 9,460,846 (the "'846 Patent").

As described below, the '912 Publication and the '766, '054, and '157 Patents disclose designs that are substantially similar to designs later claimed in the Sensor Design Patents, and show the designs claimed in the Sensor Design Patents are functional and non-ornamental. The

'694 Application and the '846 Patent disclose a design that is substantially similar to the design later claimed in the D131 Patent, and show the design claimed in the D131 Patent is functional and non-ornamental.

On June 27, 2018, Apple filed U.S. Patent Application 29/654,754 (the "'754 Application), which eventually issued as U.S. Patent No. D882,563 (the "D563 Patent").

Apple subsequently filed, as continuations that claim priority to the D563 Patent, U.S. Patent Applications 29/684,822 (March 25, 2019), 29/816,024 (November 18, 2021), and 29/816,025 (November 18, 2021), which issued as D883,279, D947,842, and D962,936, respectively (and which are collectively identified as the Sensor Design Patents).

On August 11, 2014, Apple filed U.S. Patent Application 29/498,998 (the "'998 Application"), which eventually issued as U.S. Patent No. D735,131 (the "D131 Patent").

Jeffrey Myers and others at Apple selected the law firm Brownstein Hyatt Farber Schreck, LLP to prosecute the utility patent applications that resulted in the '912 Publication and eventual issuance of the '054 Patent and the '157 Patent, and selected the law firm Kilpatrick Townsend & Stockton LLP to prosecute the utility patent application that resulted in the eventual issuance of the '846 Patent. Mr. Myers and others at Apple selected a different firm, Sterne, Kessler, Goldstein and Fox PLLC, to prosecute each of the design patent applications that resulted in the issuance of the Sensor Design Patents and the D131 Patent, in part to facilitate Apple's inequitable conduct. Mr. Myers and others at Apple compartmentalized information about these highly related patents and applications so that Sterne, Kessler, Goldstein and Fox PLLC would not disclose but-for material information as discussed below.

Apple identified the following individuals as inventors of D883,279, D947,842, and D962,936: Jody Akana, Molly Anderson, Bartley K. Andre, Shota Aoyagi, Anthony Michael

Ashcroft, Marine C. Bataille, Jeremy Bataillou, Markus Diebel, M. Evans Hankey, Julian Hoenig, Richard P. Howarth, Joanathan P. Ive, Julian Jaede, Duncan Robert Kerr, Peter Russell-Clarke, Benjamin Andrew Shaffer, Mikael Silvanto, Sung-Ho Tan, Clement Tissandier, Eugene Antony Whang, and Rico Zorkendorfer (collectively the "Named Design Inventors").

Apple identified the following individuals as inventors of the D131 Patent: Jody Akana, Bartley K. Andre, Shota Aoyagi, Anthony Michael Ashcroft, Jeremy Bataillou, Daniel J. Coster, Daniele De Iuliis, M. Evans Hankey, Julian Hoenig, Richard P. Howarth, Jonathan P. Ive, Duncan Robert Kerr, Marc A. Newson, Matthew Dean Rohrbach, Peter Russell-Clarke, Benjamin Andrew Shaffer, Mikael Silvanto, Christopher J. Stringer, Eugene Antony Whang, and Rico Zörkendörfer (collectively the "Named D131 Inventors").

A design patent is "created for the purpose of ornamenting" and cannot be the result of or "merely a by-product" of functional or mechanical considerations. MPEP 1504.01(c) (9th Ed. 2018); 35 U.S.C. § 171. Design patents lacking ornamentality are rejected under 35 U.S.C. § 171 when the claimed feature(s) of the design application are primarily functional. *Id.* The examiner may use the specification of an analogous utility patent or the specification of a related utility patent to establish a prima facie case that the claimed feature(s) is/are primarily functional. *Id.*

Mr. Myers, the Named Design Inventors, the Named D131 Inventors, and others at Apple involved in the prosecution of the Apple Design Patents had a duty to disclose information material to patentability to the USPTO during patent prosecution. Material information includes information that the claimed designs are functional, non-ornamental, or otherwise not patentable subject matter, as well as information regarding inventorship. As discussed below, Apple concealed (a) the functionality and non-ornamentality of the claimed designs, including at least

one reference, and (b) that Apple had named the incorrect inventors and concealed the identity of the correct inventors.

a. Apple's Concealment Of Material References And The Functionality And Non-Ornamentality Of The Claimed Designs

Apple, through Mr. Myers and others involved in the prosecution of the Sensor Design Patents, withheld at least two references and additional information that was material to patentability during the prosecution of the Sensor Design Patents with intent to deceive the USPTO.

During prosecution of the Sensor Design Patents, Apple did not disclose the '282 Application, which Apple filed on August 30, 2018, or the '912 Publication, which published on March 7, 2019—even though the filing and publication were both before the filing dates of the respective Sensor Design Patents.

Mr. Myers and others at Apple had knowledge of the '282 Application and the '912 Publication prior to and during prosecution of the Sensor Design Patents.

Mr. Myers and other at Apple knew that the '282 Application and the '912 Publication disclosed that the designs claimed in the Sensor Design Patents were functional and non-ornamental.

Had Apple cited the '282 Application or the '912 Publication during prosecution of the Sensor Design Patents, the Sensor Design Patents would not have issued because the Examiner would have known the claimed designs are primarily functional.

The concealment of the '282 Application and the '912 Publication was but-for material to the issuance of the Sensor Design Patents because, had Apple disclosed the '282 Application or the '912 Publication to the Patent and Trademark Office ("Patent Office"), the disclosure would

have established the claimed designs were primarily functional and non-ornamental, and the Examiner would not have allowed the claims. The Examiner would have rejected the claims as directed to ineligible non-statutory subject matter under 35 U.S.C. § 171.

Apple, through Mr. Myers and others involved in the prosecution of the D131 Patent, withheld at least one reference and additional information that was material to patentability during the prosecution of the D131 Patent with intent to deceive the USPTO.

During prosecution of the D131 Patent, Apple did not disclose the '694 Application, which Apple filed on June 20, 2014—even though the filing was before the filing date of the D131 Patent.

Mr. Myers, the Named D131 Inventors, and others at Apple had knowledge of the '694 Application prior to and during prosecution of the D131 Patent.

Mr. Myers and others at Apple knew that the '694 Application disclosed that the design claimed in the D131 Patent was functional and non-ornamental.

Had Apple cited the '694 Application during prosecution of the D131 Patent, the D131 Patent would not have issued because the Examiner would have known the claimed design is primarily functional.

The concealment of the '694 Application was but-for material to the issuance of the D131 Patent because, had Apple disclosed the '694 Application to the Patent Office, the disclosure would have established the claimed designs were primarily functional and non-ornamental, and the Examiner would not have allowed the claims. The Examiner would have rejected the claims as directed to ineligible non-statutory subject matter under 35 U.S.C. § 171.

For example, one factor that demonstrates a claimed design is directed toward ineligible functional subject matter is existence of a concomitant utility application. The Patent Office

instructs Patent Examiners that a "specification of an analogous utility patent" evidencing a claimed design lacks ornamentality can be cited as evidence supporting an Examiner's rejection.

On information and belief, the Named Design Inventors knew that the designs claimed in the Sensor Design Patents were functional and non-ornamental, the Named D131 Inventors knew that the design claimed in the D131 Patent was functional and non-ornamental, and, including as a result of their exposure to the development process, the Named Design Inventors and Named D131 Inventors also knew that the claimed designs had not been created for the purpose of ornamenting the article in which they are embodied.

As shown below, the '912 Publication demonstrates the functionality of at least the convex protrusion, the arc-shaped ECG sensors, and the photodiodes claimed in the Sensor Design Patents.

D883,279	Functional Disclosure in Withheld '912					
	Utility Application					
	Convex Protrusion					
	"The carrier 404 may be dome-shaped or					
	otherwise non-planar, as shown in FIGS. 4A-4C, such					
	that the second surface 408 protrudes or extends away					
	from a back member 402 of the watch 400. This is					
	best illustrated in FIGS. 4B and 4C." '912					
	Publication at [0083].					

Reserved Corona Protection						
FIG. 8						

D883,279	Functional Disclosure in Withheld '912 Utility Application				
	Claim 11: "The electronic watch of claim 8, wherein: the carrier is attached to a read of the housing and protrudes from the housing." '157 Patent.				
	202 206 432 412 414 404. Transparent Convex Protrusion				
	FIG. 4B				
	Arc-Shaped Electrodes "The electrodes may be used to provide an ECG function for the device 100. For example, a 2-lead ECG function may be provided when a user of the device 100 contacts first and second electrodes that receive signals from the user." '912 Publication at [0044]. See also '766 Patent at 5:7-11				
	"[T]he first and second electrodes 412, 414 may be arc-shaped (e.g., semi-circle-shaped), and may be positioned around a central opening 418 and concentric ring of openings 420 formed in the masks 422." '912 Publication at [0086].				
Transparent Convex Pretrusion	Claim 9: "The electronic watch of claim 8, wherein: the first electrode is arc-shaped and defines a first end and a second end; the second electrode is arc-shaped and defines a third end and a fourth end." '157 Patent.				

D883,279	Functional Disclosure in Withheld '912 Utility Application			
	404 442 440 FIG. 5E			
Transparent Convex Protrusion FIG. 4	Photodiodes [0096] "The optical sensor subsystem 416 may include a substrate 452 on which the set of one or more light emitters (e.g., LEDS) and the set of one or more light receivers (e.g., photodetectors, such as photodiodes) are attached." [0097] "The processing subsystem 444 may activate the light emitters and light receivers to perform a sensor function (e.g., to determine a heart rate)." FIG. 5B			

D883,279	Functional Disclosure in Withheld '912 Utility Application				
	510 512 520b 414 506 500a 518b 508 412 FIG. 5C				

As shown below, the '694 Application demonstrates the functionality of the design claimed in the D131 Patent.

<u>D735131</u>	Functional Disclosure in Withheld '694 Utility Application			
FIG. 10 Portion of Fig. 9	100 202 0 208 108 102 FIG. 1A			
FIG. 10 is a perspective view thereof showing	[0016] FIG. 1A depicts a front perspective view of			
the charger in another environment in which	an example inductive power transfer system in an			
it may be used;	unmated configuration.			

FIG. 9 is a perspective view thereof showing the charger in an environment in which it may be used;	[0047] FIG. 1A depicts a front perspective view of an example inductive power transfer system in an unmated configuration. The illustrated embodiment shows an inductive power transmitter dock that is configured to couple to and wirelessly pass power to an inductive power receiver accessory such as a portable electronic device or wearable accessory.
FIG. 11	202 °C 102
	FIG. 1B
FIG. 11 is a perspective view thereof showing the charger in another environment in which it may be used.	[0017] FIG. 1B depicts a front perspective view of an example inductive power transfer system in a mated configuration.
	[0054] As shown, the inductive power receiver 202 may include a lower surface 208 that may interface with, align or otherwise contact an interface surface 108 of the inductive power transmitter 102. In this manner, the inductive power receiver 202 and the inductive power transmitter 102 may be positionable with respect to each other. In certain embodiments, the interface surface 108 may be configured in a particular shape that mates with a complementary shape of the inductive power receiver 202, for example as shown in FIG. 1B. The interface surface 108 may include a concave shape that follows a selected curve. The bottom surface 208

examples,	the	interface	surface	108	may	be
substantially flat.						

Mr. Myers and the Named Design Inventors' knowledge that the claimed designs were directed toward ineligible subject matter is further evidenced by the public statements of Apple's counsel and the statements of Apple employee Brian Land in an International Trade Commission ("ITC") hearing. See In the Matter of Certain Light-Based Physiological Measurement Devices and Components Thereof - Investigation No. 337-TA-1276.

For example, Apple's counsel represented that:

Your Honor will hear that the shape, a dome shape of the watch, has been constant since the [Apple Watch] Series 0. And the reason for that domed, curved shape, there are multiple reasons, one of which has to do with charging. Your Honor may have seen that the Apple Watch can be placed in a charging cradle. The dome fits snugly in the cradle and is designed to align the watch with the charging hardware components so that the charging can occur in an efficient way. There was a very practical reason for that dome shape. Again, that was part of the original Apple Watch [since 2015].

Id. at 47:14-25.

As another example, Mr. Land testified:

My understanding is the primary reason that it was dome-shaped was to provide a little extra space to fit the coils that were part of the wireless charging system. The Apple Watch charges wirelessly through a dock that has a complementary shape, and the dome-shape, when in combination with the charging cradle, in addition to providing additional space for the charging coils, it also provides a self-centering mechanism so that, when you place it on the cradle, it aligns itself well to the other -- the charger for efficient wireless charging.

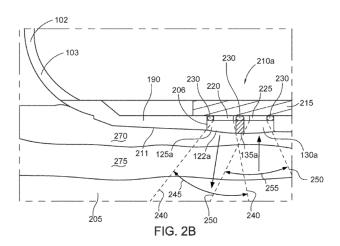
Id. at 959:14-960:2.

Apple also filed and obtained U.S. Patent No. 10,702,211 ("the '211 patent"). The '211 patent describes the functionality of the sensor structure on the Apple watch and shows Apple believes the convex protruding back of the Apple watch provides key functionality. The '211 patent was filed on July 14, 2017, and issued July 7, 2020. The '211 patent was prosecuted by yet another firm selected by Apple and Mr. Myers – Kilpatrick Townsend and Stockton LLP. Mr.

Myers was listed as an attorney of record during prosecution of the '211 patent. On information and belief, Mr. Myers had knowledge of this patent and chose not to cite the '211 patent during prosecution of the Sensor Design Patents to deceive the USPTO into issuing the Sensor Design Patents. The '211 patent explains in detail the purely functional nature of the Sensor Design Patents:

[R]eferring to Fig. 2B, for first photosensor 210a to accurately sense the time variant blood within user's skin 205 (e.g., skin) and/or underlying tissue, the user must have both the transmit and the receive windows in direct and intimate contact with their skin, preferably with enough force to push the window into their skin so that I displaces not only arterial blood 270, but also a substantial amount of lower-pressure venous blood 275.

'211 patent at 8:2-9.



The '211 patent further claims this protrusion structure:

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What is claimed is:

- 1. A portable electronic device comprising:
- a housing having an opening extending from an interior surface of the housing to an exterior surface of the housing:
- a photosensor window positioned within the opening, the photosensor window including:
 - a first transparent region that allows light from a photoemitter positioned within the housing to pass through the opening, and wherein the first transparent region forms a first portion of a perimeter of the photosensor window;
 - a second transparent region that allows light to pass through the opening and be received by a photodetector that is positioned within the housing, and wherein the second transparent region forms a second portion of the perimeter of the photosensor window; and
 - an opaque region positioned between and optically 20 isolating the first transparent region from the second transparent region;
 - wherein the first transparent region, the second transparent region and the opaque region are arranged to form a convex surface that forms a portion of an ²⁵ exterior surface of the electronic device.

Sound United incorporates by reference its Initial Design Patent Invalidity Contentions served in this case. Those contentions supplement the allegations above and further demonstrate that the designs claimed in the Apple Design Patents are functional and non-ornamental.

On information and belief, Mr. Myers, the Named Design Inventors, the Named D131 Inventors, and others at Apple knew that the designs claimed in the Apple Design Patents were functional, non-ornamental, and resulted from development of functional aspects of the Apple Watch, including features present in original Apple Watch Series 0 in 2015.

The concealment of the '282 Application and the '912 Publication, the functional nature of the claimed designs, and the fact that the claimed designs resulted from the development of functional features of the Apple Watch was but-for material to the issuance of the Sensor Design Patents. Had Apple disclosed this information to the Patent Office, this information would have established the claimed designs were primarily function and non-ornamental, and had not been

created for the purpose of ornamenting the Apple Watch. As a result, the Examiner would have rejected the claims as directed to ineligible non-statutory subject matter under 35 U.S.C. § 171.

On information and belief, Mr. Myers, the Named Design Inventors, and others at Apple affirmatively concealed the '282 Application and the '912 Publication, misrepresented the functional nature of the claimed designs, and misrepresented the fact that the claimed designs resulted from the development of functional features of the Apple Watch. They did so because they knew that identifying this information to the USPTO would have resulted in the USPTO rejecting the claims and not issuing the patents. The single most reasonable inference from this conduct is that they intended to deceive the Patent Office into improperly allowing the Sensor Design Patents.

The concealment of the '694 Application, the functional nature of the claimed designs, and the fact that the claimed designs resulted from the development of functional features of the Apple Watch was but-for material to the issuance of the D131 Patent. Had Apple disclosed this information to the Patent Office, this information would have established the claimed design was primarily functional and non-ornamental and had not been created for the purpose of ornamenting the Apple Watch. As a result, the Examiner would have rejected the claim as directed to ineligible non-statutory subject matter under 35 U.S.C. § 171.

On information and belief, Mr. Myers, the Named D131 Inventors, and others at Apple affirmatively concealed the '694 Application, the '768 Publication, and the '846 Patent, misrepresented the functional nature of the claimed design, and misrepresented the fact that the claimed design resulted from the development of functional features of the Apple Watch. They did so because they knew that identifying this information to the USPTO would have resulted in the USPTO rejecting the claim and not issuing the D131 Patent. The single most reasonable

inference from this conduct is that they intended to deceive the Patent Office into improperly allowing the D131 Patent.

b. Apple's Concealment Of Inventorship

Apple, through Mr. Myers, the Named Design Inventors, the Named D131 Inventors, and others at Apple affirmatively misrepresented who should be named as inventors and concealed the identity the inventors who should have been named as inventors of the Apple Design Patents with intent to deceive the USPTO.

The '912 Publication, as well as the '766, '054 and '157 Patents, all list the same individuals as inventors: Sameer Pandya, Adam T. Clavelle, Erik G. de Jong, Michael B. Wittenberg, Tobias J. Harrison-Noonan, Martin Melcher, Zhipeng Zhang, Steven C. Roach, and Steven P. Cardinali (the "Named Utility Inventors"). During prosecution of the Sensor Design Patents, Apple did not disclose that the Named Design Inventors did not invent the claimed subject matter and/or that one or more of the Named Utility Inventors should have been named as inventors.

The '912 Publication, as well as the '766, '054, '157 Patents disclose the functional and non-ornamental designs claimed in the Sensor Design Patents and do not name any of the Named Design Inventors. For example, Apple's '912 Publication, as well as the '766, '054, '157 Patents, disclose a housing having a surface and circular wall protruding from the surface, and a light permeable cover arranged above a portion of the housing and covering the detectors. They disclose "a carrier 404 [that] may have a first surface 406 that is interior to the watch body 202... and a second surface 408 that is exterior to the watch body 202." '912 Publication at [0083]. They further disclose that the "carrier 404 may be dome-shaped or otherwise non-planar ... such that the second surface 408 protrudes or extends away from a back member 402 of the watch 400." *Id*.

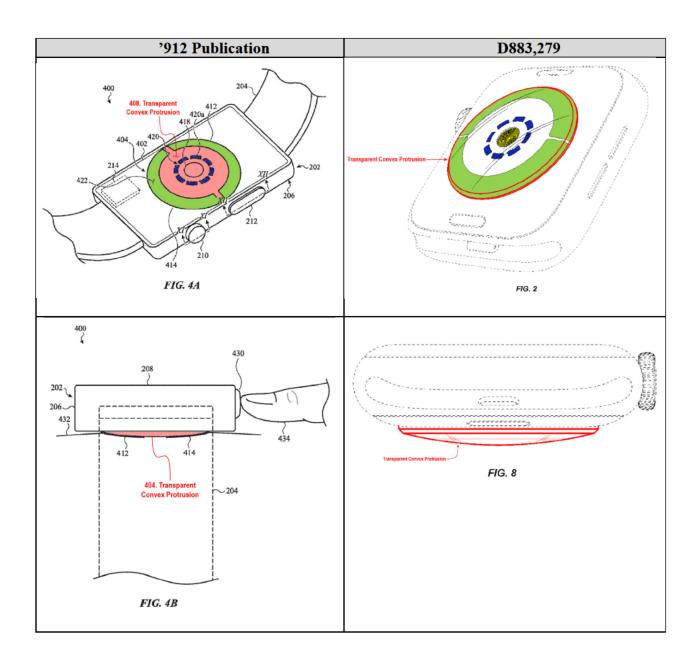
They disclose that the "carrier 404 may be transparent to all wavelengths of light or just some wavelengths (and even one wavelength) of light." *Id.* at [0084]; *see also* Figs. 4A-4C. They disclose that "the carrier is an optically transparent material having a dome shape." *Id.* at [0047]. Claim 8 states in part: "An electronic watch, comprising: … a carrier attached to a rear of the housing and formed from an optically transparent material…." *Id.* at Claim 8. They disclose that the optical components of the sensor system can include circular windows formed of crystal, glass, or plastic.

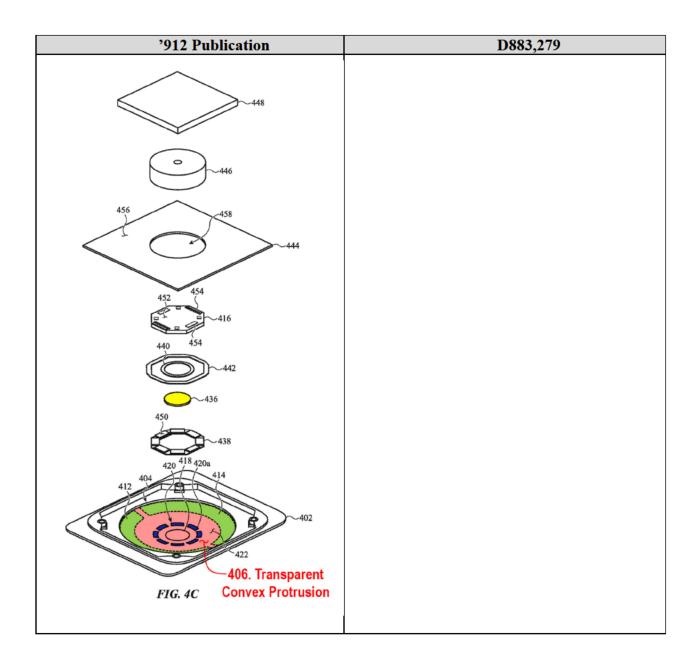
Apple's '912 Publication, as well as the '766, '054, '157 Patents, also disclose arc-shaped ECG electrodes, eight photodiodes, and a central Fresnel lens. For example, at least Figs. 4A, 4C, and 5E and the corresponding text of the '912 Publication, as well as the '766, '054, '157 Patents, disclose "an electronic watch that incorporates a set of electrodes." *Id.* at [0014]. They further disclose that the "first and second electrodes 412, 414 may be arc-shaped." *Id.* at [0086]. At least Figs. 4A, 4C, 5B, 5C, and 5E of the '912 Publication disclose eight photodiodes. Further, they disclose that "the lens 436 may be or include a Fresnel lens[.]" *Id.* at [0092]; Fig. 4C.

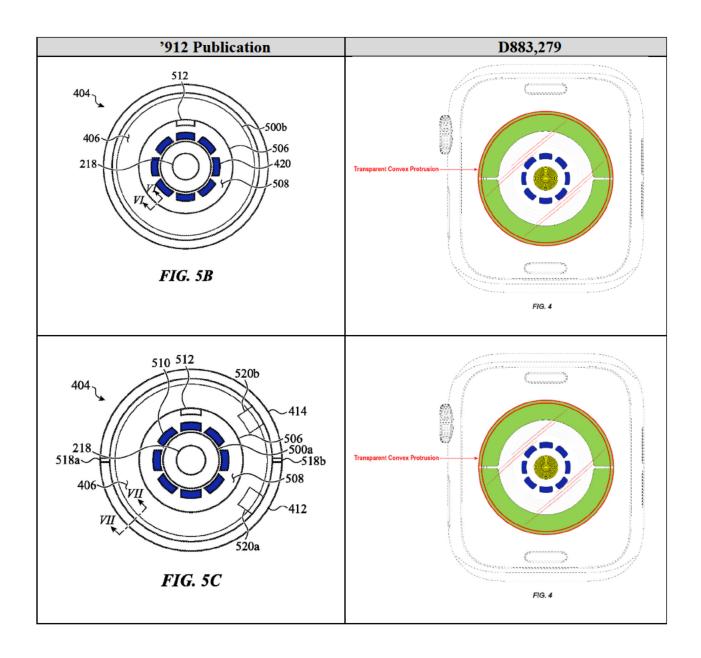
The Sensor Design Patents similarly claim one or more of a transparent or translucent convex surface, arc-shaped ECG electrodes, eight photodiodes, and a central Fresnel lens. The figures in D883,279 use oblique line shading on the convex surface. Pursuant to MPEP § 1503.02 (II), "oblique line shading must be used to show transparent, translucent and highly polished or reflective surfaces, such as a mirror."

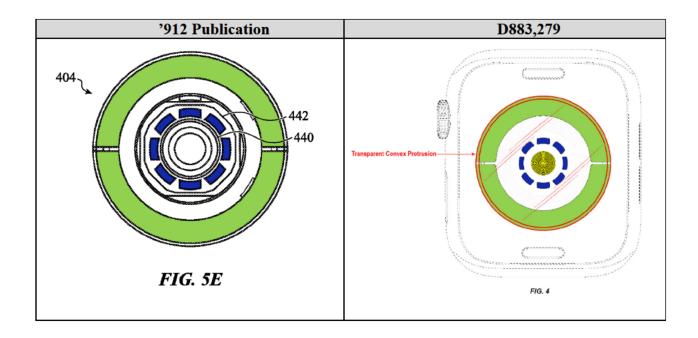
The three charts below compare the disclosures in Apple's '912 Publication, as well as the '766, '054, '157 Patents, to the claims of the Sensor Design Patents.

The chart for D883,279 is below.

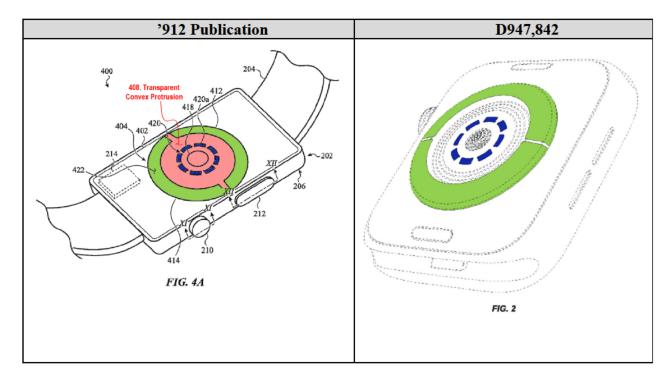


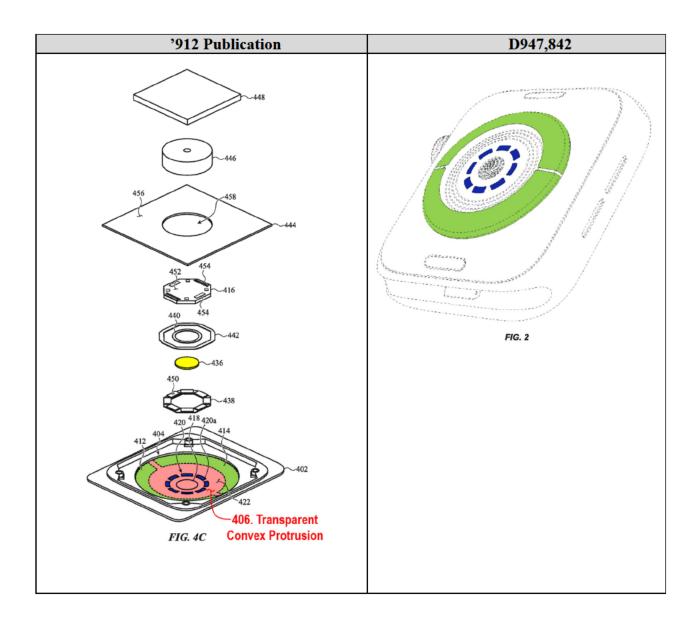


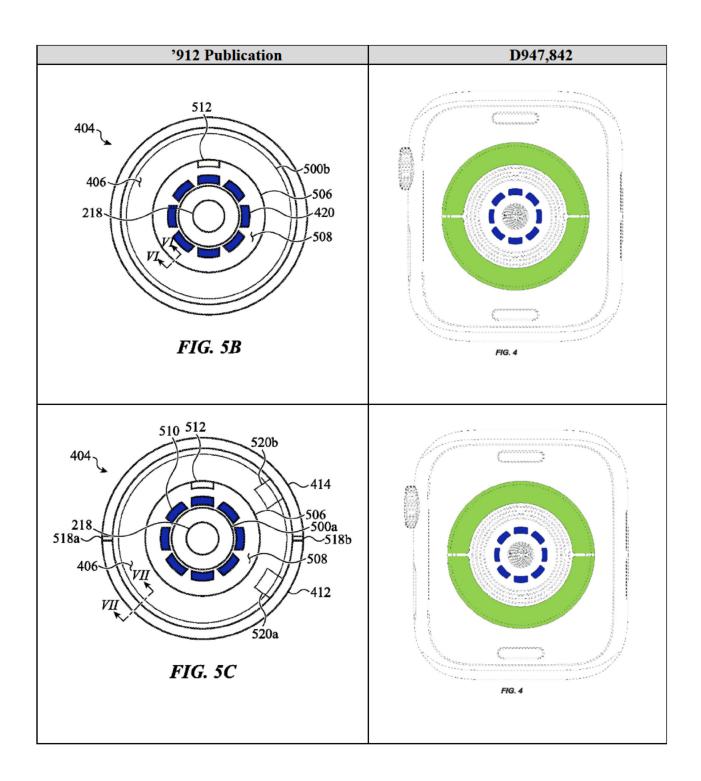


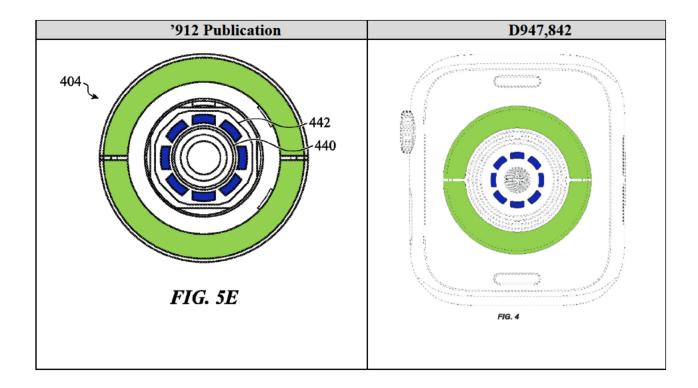


The chart for D947,842 is below.

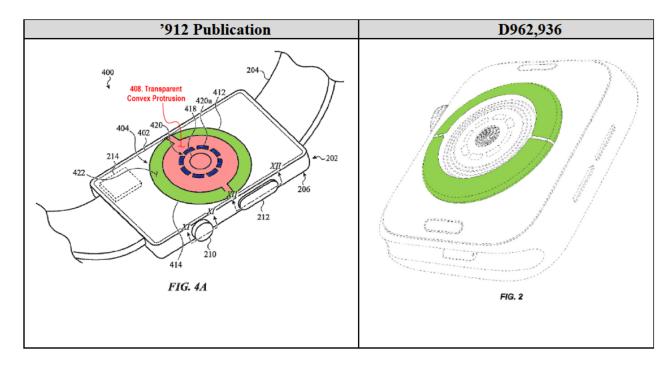


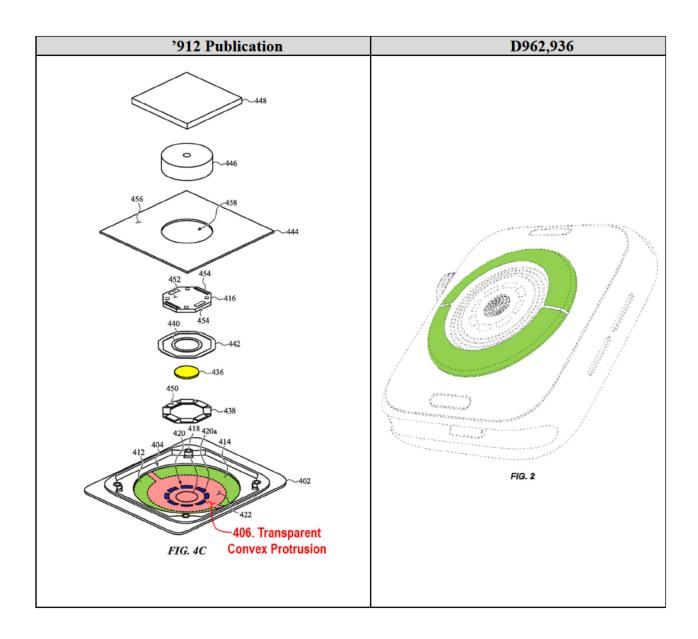


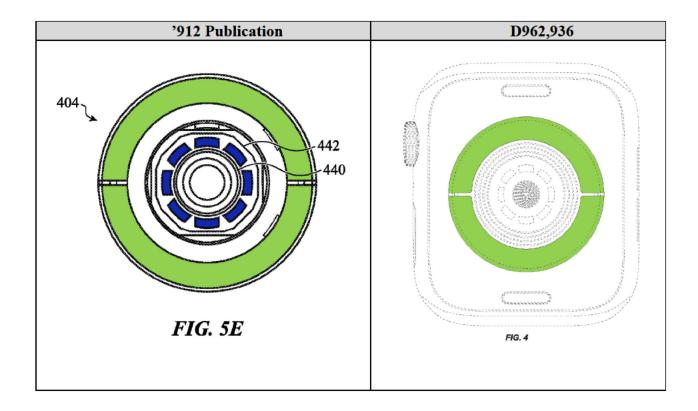




The chart for D962,936 is below.







As shown above, the Sensor Design Patents claim functional and non-ornamental designs created during development of the non-ornamental features disclosed and claimed in Apple's '912 Publication, as well as the '766, '054, '157 Patents. Any patent-eligible subject matter claimed in the Sensor Design Patents would have been conceived by the Named Utility Inventors. The Sensor Design Patents should have named as inventors the Named Utility Inventors.

Patent applications must include all inventors who contributed to the conception of the claimed invention, and only inventors who contributed to the conception of the claimed invention. A patent is invalid if it does not name all the inventors. See 35 U.S.C. §§ 101, 115, 116. Title 35 U.S.C. § 115 provides that "An application for patent ... shall include, or be amended to include, the name of the inventor for any invention claimed in the application." Section 115 further states, "Except as otherwise provided in this section, each individual who is the inventor or a joint inventor of a claimed invention in an application for patent shall execute an oath or declaration in

connection with the application." The Manual of Patent Examining Procedure ("MPEP") thus instructs examiners to reject applications with improper inventorship. *See* MPEP § 2109 (explaining that U.S. patent law requires "naming of the actual inventor"). The MPEP explains that "if a determination is made that the inventive entity named in a U.S. application is not correct ... a rejection should be made on this basis." *Id.*; *see also* MPEP § 2157.

Mr. Myers and the Named Design Inventors had a duty to disclose information material to patentability to the USPTO and breached that duty. Mr. Myers, the Named Design Inventors, and others at Apple knew that inventorship was incorrect. But for their misrepresentations regarding inventorship, suppressed evidence and withheld information, the PTO would not have allowed the claims. The identity of the true inventors was highly material to the issuance of the Sensor Design Patents. The Examiner also would have rejected the claims because the Sensor Design Patents would not have received priority to D882,563 and would therefore have been rejected as anticipated or obvious in view of intervening prior art, such as the '912 Publication. *See* 35 U.S.C. § 120.

On information and belief, Mr. Myers and the Named Design Inventors affirmatively misrepresented the correct inventorship to the USPTO because they knew that, if they identified the correct inventors, the applications would no longer have priority to the originally filed design patent and the USPTO would have known the claims were functional. The single most reasonable inference from Mr. Myers and the Named Design Inventors' deliberate concealment of their knowledge that inventorship of the Sensor Design Patents was incorrect is that they intended to mislead the USPTO into improperly allowing the Sensor Design Patents.

The effect of Apple's conduct is not limited to the Design Patents. All subsequent "child" or other related patents that are based on the same specification or relevant portions thereof, are

tainted by Apple's inequitable conduct and, therefore, are also unenforceable under the doctrine of infectious unenforceability.

The '694 Application, the '768 Publication, and the '846 Patent list the following individuals as inventors: Christopher S. Graham, Eric S. Jol, and Makiko K. Brzezinski (the "Named '846 Inventors"). During prosecution of the D131 Patent, Apple did not disclose that the Named D131 Inventors did not invent the claimed subject matter and/or that one or more of the Named '846 Inventors should have been named as inventors.

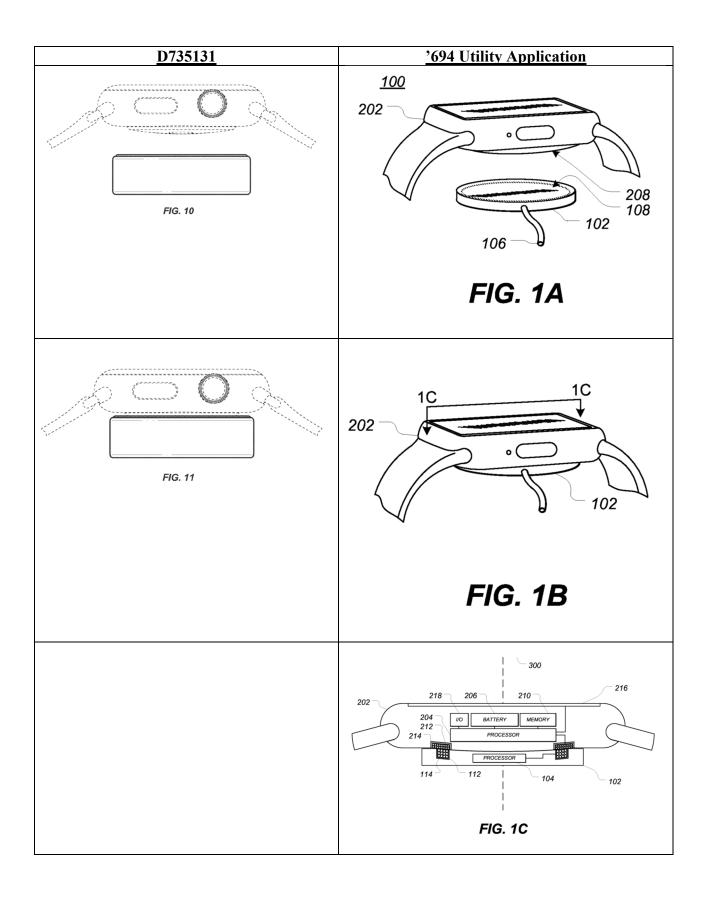
The '694 Application, as well as the '768 Publication and the '846 Patent, disclose the functional and non-ornamental designs claimed in the D131 Patent and do not name any of the Named D131 Inventors. The '694 Application discloses that the charger claimed in the D131 Patent is identified as the power transmitter in the '694 Application and the design is primarily functional in order to house the circular transmit coil and interface with the shape of the power receiver (the back of the Apple Watch).

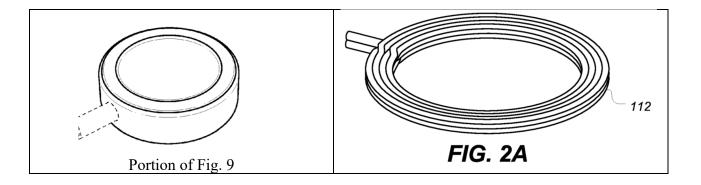
For example, the '694 Application discloses that "the system 100 may include an inductive power transmitter 102 and an inductive power receiver 202" wherein "[t]he inductive power transmitter 102 and the inductive power receiver 202 may each respectively include a housing to enclose electronic components therein." '694 Application ¶ 52. It discloses that "Although the system 100 illustrated in FIG. 1A depicts a wristwatch, any electronic device may be suitable to receive inductive power from an inductive power transmitting dock." *Id.* ¶ 51. The '694 Application shows in figures 1A-1C that the design of the upper surface of the charger/power transmitter correspond to the design of the back of the Apple Watch because "the inductive power receiver 202 may include a lower surface 208 that may interface with, align or otherwise contact an interface surface 108 of the inductive power transmitter 102" and "the interface surface surface 108

may be configured in a particular shape that mates with a complementary shape of the inductive power receiver 202, for example as shown in FIG. 1B." Id. ¶ 54. Specifically, "[t]he interface surface 108 may include a concave shape that follows a selected curve" while "[t]he bottom surface 208 of the inductive power receiver 202 may take a convex shape following the same or substantially similar curve as the interface surface 108." Id. As illustrated, the bottom surface 208 of the inductive power receiver 202 contacts the interface surface of the inductive power transmitter 102." Id. ¶ 56. The shapes correspond because misalignment may "substantially reduce power transfer efficiency" and it is preferred that "the inductive power transmitter 102 and the inductive power receiver 202 are aligned along a mutual axis 300, as shown in FIG. 1C." Id. ¶ 62.

The '694 Application further explains that "[t]he inductive power transmitter 102 may also include a transmit coil 112 having one or more windings." *Id.* ¶ 60. "FIG. 2A depicts a top perspective view of an example unshielded transmit coil 112 that may be included in the embodiments depicted in FIGS. 1A-1C." *Id.* ¶ 63. The shape of charger also corresponds to the shape of the transmit coil and the '694 Application explains that, "[i]n many examples, the windings may be provided in a substantially annular shape," and "[i]n many embodiments, the leads of the coil 112 may exit the coil on the same side." *Id.*

The referenced figures from the '694 Application are presented in the chart below with corresponding figures from the D131 Patent.





As shown above, the '694 Application discloses the functional and non-ornamental designs claimed in the D131 Patent and does not name any of the Named D131 Inventors. Any patent-eligible subject matter claimed in the D131 Patent would have been conceived by the Named '846 Inventors. The D131 Patent should have named as inventors the Named '846 Inventors.

Mr. Myers and the Named D131 Inventors had a duty to disclose information material to patentability to the USPTO and breached that duty. Mr. Myers, the Named D131 Inventors, and others at Apple knew that inventorship was incorrect. But for their misrepresentations regarding inventorship, suppressed evidence and withheld information, the PTO would not have allowed the claim. The identity of the true inventors was highly material to the issuance of the D131 Patent.

On information and belief, Mr. Myers and the Named D131 Inventors affirmatively misrepresented the correct inventorship to the USPTO because they knew that, if they identified the correct inventors, the USPTO would have known the claim was functional. The single most reasonable inference from Mr. Myers and the Named D131 Inventors' deliberate concealment of their knowledge that inventorship of the D131 Patent was incorrect is that they intended to mislead the USPTO into improperly allowing the D131 Patent.

The effect of Apple's conduct is not limited to the D131 Patent. All subsequent "child" or other related patents that are based on the same specification or relevant portions thereof, are

tainted by Apple's inequitable conduct and, therefore, are also unenforceable under the doctrine of infectious unenforceability.

Third Defense

Apple's claims are barred, in whole or in part, by the doctrine of patent misuse.

Fourth Defense

Apple's claims are barred, in whole or in part, by the doctrine of unclean hands.

Fifth Defense

Apple's claims are barred, in whole or in part, by reason of estoppel, the dedication-disclosure rule, and/or the other legal doctrines limiting the scope of the claims and their equivalents. Apple is estopped from construing any valid claim of the Apple Patents to be infringed or to have been infringed by any product made, used, imported, sold, or offered for sale by Sound United in view of prior art and/or because of admissions, representations, and/or statements made to the Patent Office during prosecution of any application leading to the issuance of the Apple Patents or any related patent, because of disclosures or language in the specifications of the Apple Patents, and/or because of limitations in the claims of the Apple Patents.

Sixth Defense

To the extent that Apple and/or any predecessors in interest or any licensees to the Apple Patents failed to properly mark any of their relevant products or materials as required by 35 U.S.C. § 287, or otherwise failed to give proper notice that Sound United's actions allegedly infringe the Apple Patents, Sound United is not liable to Apple for the acts alleged to have been performed before Sound United received actual notice that the accused devices were allegedly infringing the Apple Patents. Apple's claims for relief are further barred, in whole or in part, under 35 U.S.C. §§ 286 and 288. Apple failed to give proper notice to Sound United of its claims under the patent

laws of the United States and have failed to establish any basis for damages and/or liability prior to patent issuance.

COUNTERCLAIMS

For its counterclaims against Apple, Inc. ("Apple"), Sound United, LLC, ("Sound United") states and alleges as follows:

NATURE OF THE ACTION

1. These counterclaims seek a declaratory judgment of non-infringement, invalidity, and unenforceability of U.S. Design Patent Nos. D833,279; D947,842; D962,936, and D735,131; asserted by Apple against Sound United in this action (the "Apple Design Patents"). Sound United seeks judgment under the Patent Laws of the United States, 35 U.S.C. § 100, *et seq.*, and the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202.

PARTIES

- Sound United is a Delaware limited liability company with a place of business at
 Discovery, Irvine, California 92618.
- 3. Apple claims to be a California corporation with its principal place of business at One Apple Park Way, Cupertino, California 95014.

JURISDICTION AND VENUE

- 4. These counterclaims arise under the patent laws of the United States, 35 U.S.C. § 100 *et seq.*, and the Declaratory Judgment Act 28, U.S.C. §§ 2201 and 2202.
- 5. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331, 1337, 1338, and 1367(a).
- 6. Venue is proper in this Judicial District because, among other reasons, Apple sued Sound United in this judicial district for infringing the Apple Design Patents.
- 7. Venue is also proper in this District under 28 U.S.C. § 1391(b) and (c). For venue purposes, Apple can be found in and transacts business in this District. In addition, Apple has

engaged in the conduct alleged herein in this District.

8. Apple is subject to personal jurisdiction in this district because, among other reasons, Apple sued Sound United in this judicial district.

FACTS

- 9. On October 20, 2022, Apple filed the Complaint for Patent Infringement against Sound United in this action. Apple alleges that it is the exclusive and current owner of all rights, title, and interest in the Apple Design Patents, including the right to exclude and the right to seek damages and injunctive relief.
- 10. In the Complaint, Apple alleges that Sound United infringes the Apple Design Patents by making and selling the W1 watch. Sound United denies that it infringes any claims of the Apple Design Patents and denies that Apple is entitled to any relief.
- 11. Accordingly, an actual and justiciable controversy has arisen and now exists between Sound United and Apple as to the infringement and validity of the Apple Design Patents. This controversy is ripe for this Court to decide.

COUNT I

(Declaratory Judgment of Noninfringement)

- 12. Sound United incorporates by reference the allegations contained in all preceding paragraphs of these counterclaims.
- 13. There exists an actual and justiciable controversy between Sound United and Apple regarding whether Sound United has infringed any claims of the Apple Design Patents by making, using, selling, offering to sell in the United States or importing into the United States the W1 watch and the charger for the W1 watch, and this controversy is ripe for adjudication by this Court.
 - 14. The W1 watch and charger do not infringe any claims of the Apple Design Patents.

15. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. ¶ 2201 et seq., Sound United requests a judicial determination that the sale, offer for sale, manufacture, importation, or use of the W1 watch and charger do not infringe any valid and enforceable claim of the Apple Design Patents.

COUNT II

(Declaratory Judgment of Invalidity)

- 16. Sound United incorporates by reference the allegations contained in all preceding paragraphs of these counterclaims.
- 17. There exists an actual and justiciable controversy between Sound United and Apple regarding the invalidity of one or more claims of the Apple Design Patents, and this controversy is ripe for adjudication by this Court.
- 18. The claims of the Apple Design Patents are invalid for failure to comply with one or more of the conditions and requirements of patentability that are set forth in 35 U.S.C. §§ 102, 103, 112, and/or 171 and the rules, regulations, and laws pertaining thereto, and for claiming functional and/or generic elements.
- 19. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. § 2201 *et seq.*, Sound United requests a judicial declaration that the claims of the Apple Design Patents are invalid.

COUNT III

(Declaratory Judgment of Unenforceability)

- 20. Sound United incorporates by reference the allegations contained in all preceding paragraphs of these counterclaims. Sound United also incorporates by reference the allegations contained in its Defenses for unenforceability based on inequitable conduct.
 - 21. There exists an actual and justiciable controversy between Sound United and Apple

regarding the unenforceability of the Apple Design Patents, and this controversy is ripe for adjudication by this Court.

22. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. § 2201 *et seq.*, Sound United requests a judicial declaration that the Apple Design Patents are unenforceable.

SOUND UNITED'S PRAYER FOR RELIEF

WHEREFORE, Sound United requests that the Court enter a judgment in Sound United's favor and grant the following relief.

- A. That all claims against Sound United be dismissed with prejudice and that all relief requested by Apple be denied;
- B. That a judgment be entered that Sound United has not and does not infringe any valid enforceable claim of the Apple Design Patents;
- C. That a judgment be entered declaring the claims of the Apple Design Patents invalid;
- D. That a judgment be entered declaring the Apple Design Patents unenforceable;
- E. That Apple and its agents, representatives, attorneys and other persons in active concert or participation with them who receive actual notice thereof, be preliminarily and permanently enjoined from threatening or initiating infringement litigation against Sound United or any of its customers, distributors, or suppliers, or charging any of them either orally or in writing with infringement of the Apple Design Patents;
- F. That a judgment be entered declaring that this action is an exceptional case within the meaning of 35 U.S.C. § 285 and that Sound United is therefore entitled to recover its reasonable attorneys' fees upon prevailing in this action;
- G. That Sound United be awarded costs, attorneys' fees, and other relief, both legal and equitable, to which it may justly entitled; and

H. That Sound United be awarded such other and further relief as is just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Fed. R. Civ. P. 38(b), Sound United, LLC, demands a trial by jury on all issues so triable.

July 5, 2023

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